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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,180	03/03/2004	James T. Russell	02-68	4931

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EXAMINER

TANINGCO, MARCUS H

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	10/792,180	RUSSELL, JAMES T.	
	Examiner	Art Unit	
	Marcus H. Taningco	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 7, 10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claims 5 and 8 is withdrawn in view of the newly discovered reference(s) to O'Leary (US 2002/0153490). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 7, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 5,341,214) in view of O'Leary (US 2002/0153490).

Re claims 1 and 6, Wong discloses a gas analyzer (Fig. 1) of the recited type comprising: a light source **54**; an infrared detector **40** in optical communication with the source **54**; and a sample cell **12** between the source **54** and the detector **40** wherein the inside surface **18** of the sample cell **12** is highly reflective (Col. 4, 16-47). Wong fails to disclose a half-ball or ball lens. O'Leary teaches a concentration detection system comprising a half-ball lens **86** disposed to collimate radiation received from the source [0040]. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong to include the lens

taught by O'Leary in order to integrate the collimated radiation passing through the sample cell evenly over the detector.

Re claim 7, Wong discloses a sample cell **12** between the source **54** and the detector **40** wherein the inside surface **18** of the sample cell **12** is highly reflective (Col. 4, 16-47).

Re claim 10, Wong discloses a gas analyzer providing: a sample cell body **12** with a sample cell chamber defined therein (Fig. 1), wherein the inside surface **18** of the sample cell **12** is highly reflective (Col. 4, 16-47), an optical aperture **58** to allow radiation to pass through the sample cell chamber (Col. 4, 35-47), a light source **54** to emit radiation to be absorbed by a sample gas, and an infrared detector **40** in optical communication with the source **54**. Wong fails to disclose a half-ball or ball lens. O'Leary teaches a concentration detection system comprising a half-ball lens **86** disposed to collimate radiation received from the source [0040]. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong to include the lens taught by O'Leary in order to integrate the collimated radiation passing through the sample cell evenly over the detector.

Re claim 12, Wong discloses a gas analyzer (Fig. 1) providing: a light source **54** to emit radiation to be absorbed by a sample gas through a sample cell **12**, and an infrared detector **40** in optical communication with the source **54** (Col. 4, 16-47). Wong fails to disclose a half-ball or ball lens. O'Leary teaches a concentration detection system comprising a half-ball lens **86** disposed to collimate radiation received from the source [0040]. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong to include the lens taught by O'Leary in order to integrate the collimated radiation passing through the sample cell evenly over the detector.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong and O'Leary in view of Eckles (US 6,369,387).

Re claims 2 and 3, Wong teaches that the inside material **18** of the sample cell **12** is coated with a layer of a material that is highly reflective but fails to specify the type of material. Eckles teaches the use of gold to reflect infrared beams (Col. 4, 26-29). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the material **18** taught by Wong to include gold in order to increase reflectance.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 6, 7, 10 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kouznetsov (US 6,410,918) discloses a diffusion-type NDIR gas analyzer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848.


The examiner can normally be reached on M - F 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878